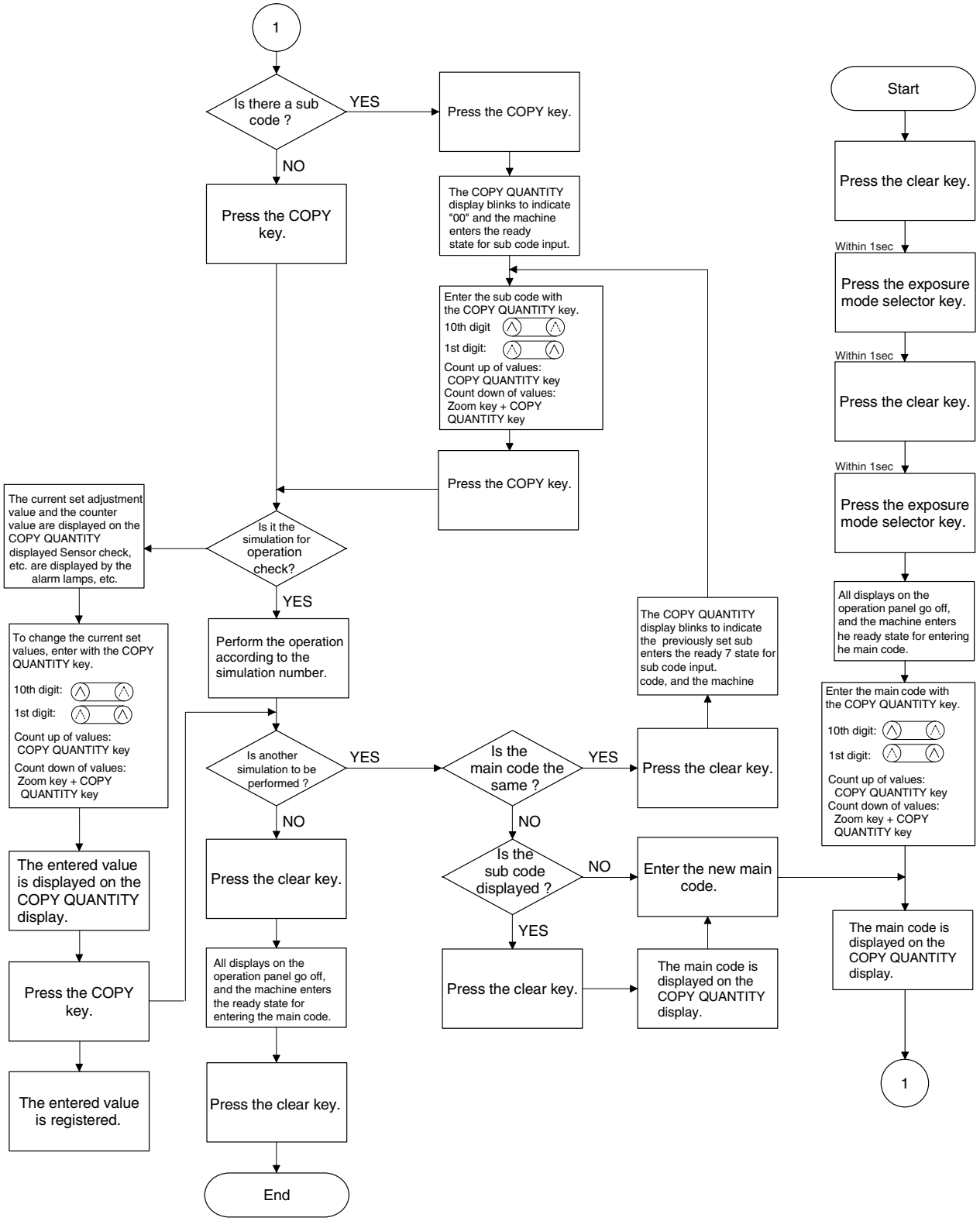
# [10] SIMULATION, TROUBLE CODES

AR-122E, AR-152E, AR-153E, AR-157E

## 1. Entering the simulation mode

To enter the serviceman simulation mode, press the keys as follows:
Clear → Density select → Clear→ Density select
To cancel the simulation mode, press the clear key.
Flow chart of entering the simulation mode



## 2. List of simulations

| Sim No. | Kind of main code | Sub code | Operation |
|---|---|---|---|
| 01 | Optical system | 01 | Mirror scan operation |
| | | 06 | Aging of mirror scanning |
| 02 | SPF Individual load operation | 02 | SPF sensor status display |
| | | 03 | Motor ON |
| | | 04 | Paper feed solenoid ON |
| | | 05 | Pressure release solenoid ON (RSPF) |
| | | 06 | Resist clutch ON (RSPF) |
| | | 07 | Gate solenoid ON (RSPF) |
| 05 | Lamp ON check | 01 | Operation panel display check |
| | | 02 | Fusing lamp, cooling fan operation check |
| | | 03 | Copy lamp ON |
| 06 | Machine individual load operation | 01 | Paper feed solenoid ON |
| | | 02 | Resist solenoid ON |
| 07 | Aging | 01 | Warm-up display and aging with jam |
| | | 06 | Intermittent aging |
| 08 | High voltage output check | 01 | Developing bias |
| | | 02 | Main charger (Grid high) |
| | | 03 | Grid voltage (Low) |
| | | 06 | Transfer charger |
| 10 | Other | None | Toner motor aging |
| 14 | Trouble reset | None | Cancel of troubles other than U2 |
| 16 | U2 trouble reset | None | Cancel of U2 trouble |
| 20 | | 01 | Maintenance counter clear |
| 21 | | 01 | Maintenance cycle setup |
| | | 02 | Mini maintenance cycle setup (Valid only when the destination is set to Japan AB series.) |
| 22 | Counter display | 01 | Maintenance counter display |
| | | 02 | Maintenance preset value display |
| | | 04 | JAM total counter display |
| | | 05 | Total counter display |
| | | 06 | Developer counter display |
| | | 08 | SPF counter display |
| | | 12 | Drum counter display |
| | | 14 | P-ROM version display |
| | | 17 | Copy counter display |
| | | 18 | Printer counter display |
| | | 19 | Scanner mode counter display |
| | | 21 | Scanner counter display |
| | | 22 | SPF JAM counter display |
| 24 | Special counter clear | 01 | JAM total counter clear |
| | | 04 | SPF counter clear |
| | | 06 | Developer counter clear |
| | | 07 | Drum counter clear |
| | | 08 | Copy counter clear |
| | | 09 | Printer counter clear |
| | | 13 | Scanner counter clear |
| | | 14 | SPF JAM total counter clear |
| | | 15 | Scanner mode counter clear |
| 25 | Main motor ON | 01 | Main motor operation check (Cooling fan motor rotation check) |
| | | 10 | Polygon motor ON |
| 26 | Various setup | 01 | Manual feed setup |
| | | 02 | (R) SPF setup |
| | | 03 | Second cassette setup |
| | | 04 | Machine duplex setup |
| | | 06 | Destination setup |
| | | 07 | Machine conditions check |
| | | 20 | Rear edge void setup |
| | | 30 | CE mark support control ON/OFF |
| | | 37 | Developer life-over termination cancel |
| | | 38 | Cancel of stop at drum life over |
| | | 39 | Memory capacity check |
| | | 40 | Polygon motor OFF time setup (Time required for turning OFF after completion of printing) |
| | | 42 | Transfer ON timing control setup |
| | | 43 | Side void setup |
| | | 44 | SPF document rear edge read setup |
| | | 62 | Energy-save mode copy lamp setup |
| | | 63 | Fan control select setup |
| | | 64 | Heater control setup during the scanner mode |
| 30 | Sensor operation check (Standard provision) | 01 | Paper sensor status display |
| 43 | Fusing temperature setup | 01 | Fusing temperature setup (Normal copy) |
| | | 04 | Fusing temperature setup 2 |
| | | 05 | Fusing temperature setup in duplex copy |
| | | 09 | Setup of fusing control of postcard size paper |
| 46 | Exposure adjustment | 01 | Copy density adjustment (300dpi) |
| | | 02 | Copy density adjustment (600dpi) |
| | | 18 | Image contrast adjustment (300dpi) |
| | | 19 | $\gamma$ table setup or AE operation mode setup |
| | | 20 | SPF exposure correction |
| | | 29 | Image contrast adjustment (600dpi) |
| | | 31 | Image sharpness adjustment |
| | | 32 | Copier color reproduction setup |
| 48 | Magnification ratio correction and black level adjustment | 01 | Front/rear (main scanning) direction and scan (sub scanning) direction magnification ratio adjustment and black level adjustment |
| 49 | | 01 | Flash ROM program writing mode |
| 50 | Lead edge adjustment | 01 | Lead edge image position |
| | | 10 | Center offset adjustment |
| | | 18 | Memory reverse position adjustment in duplex copy |
| | | 19 | Duplex copy rear edge void adjustment |
| 51 | Timing adjustment | 02 | Resist quantity adjustment |
| 53 | | 08 | SPF scan position automatic adjustment |
| 61 | Laser system operation | 03 | Polygon motor check (HSYNC output check) |
| 63 | Shading | 01 | Shading check |
| 64 | Self print | 01 | Self print |

## 3. Contents of simulations

Input method: Clear key → Exposure Select key → Clear key → Exposure Select key

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>01</td><td>01</td><td>Mirror scan operation<br>(Operation/Procedure)<br>1. When this simulation is executed, the mirror home position is detected.<br><table><tr><th>Sensor name</th><th>Display lamp</th></tr><tr><td>Mirror home position sensor</td><td>OPC drum cartridge replacement lamp</td></tr></table>2. When the _START key is pressed, scanning is executed at the speed corresponding to the currently set copy magnification ratio. The copy magnification ratio can be arbitrarily set with the magnification ratio select key/zoom key.</td></tr>
<tr><td></td><td>06</td><td>Aging of mirror scanning<br>When the PRINT switch is pressed, the mirror base performs full scan at the speed of the set magnification ratio. After 3 sec, the mirror case performs full scan again. These procedures are repeated until the clear key is pressed. (When the PRINT switch is pressed once, the ready lamp keeps OFF.)<br>The status of the mirror home position sensor is displayed with the photoconductor cartridge lamp. (The lamp is ON when the mirror is at the home position.)<br>During aging, the copy lamp keeps ON.</td></tr>
<tr><td>02</td><td>02</td><td>SPF sensor status display<br>ON/OFF of the sensors in the SPF can be checked with the following lamps.<br><table><tr><th>Display</th><th>Sensor</th></tr><tr><td>Developer cartridge replacement lamp</td><td>Document set detection (SPID)</td></tr><tr><td>Jam lamp</td><td>SPF document transport detection (SPPD)</td></tr><tr><td>Photoconductor cartridge replacement lamp</td><td>SPF cover open/close detection (SDOD)</td></tr><tr><td>SPF jam lamp</td><td>SPF open/close detection (SDSW)<br>FAX document size detection<br>Paper size detection</td></tr></table></td></tr>
<tr><td></td><td>03</td><td>Motor ON<br>(Operation/Procedure)<br>When the start key is pressed, the SPF motor rotates for 10 sec at the speed corresponding to the currently set magnification ratio.</td></tr>
<tr><td></td><td>04</td><td>Paper feed solenoid ON<br>(Operation/Procedure)<br>When the start key is pressed, the SPF paper feed solenoid repeats ON (500 ms) and OFF (500 ms) 20 times.</td></tr>
<tr><td></td><td>05</td><td>Pressure release solenoid ON (RSPF)<br>(Operation/Procedure)<br>When the start key is pressed, the RSPF document transport solenoid (SPFS) repeats ON (500 ms) and OFF (500 ms) 20 times.</td></tr>
<tr><td></td><td>06</td><td>Resist clutch ON (RSPF)<br>(Operation/Procedure)<br>When the start key is pressed, the RSPF resist clutch (SRRC) repeats ON (500 ms) and OFF (500 ms) 20 times.</td></tr>
<tr><td></td><td>07</td><td>Gate solenoid ON (RSPF)<br>(Operation/Procedure)<br>When the start key is pressed, the RSPF gate solenoid (SGS) repeats ON (500 ms) and OFF (500 ms) 20 times.</td></tr>
<tr><td>05</td><td>01</td><td>Operation panel display check<br>• When the PRINT switch is pressed, all LEDs (including 7-segment LEDs) on the operation panel are lighted. (LED check mode)<br>• When 1Up key is pressed, the LEDs on the operation panel are lighted individually from the top left to the bottom right in sequence. After completion of all individual lighting, all LEDs are lighted simultaneously. (The 7-segment LED lights the three-digit sections at the same time.)<br>Individual lighting frequency ON: 300ms, OFF: 20ms<br>• When the CLEAR key is pressed, this simulation is terminated.<br>• When the PRINT switch is pressed in the LED check mode, the machine enters the Key input check mode.<br>“Key input check mode”<br>When the machine enters the Key input check mode, the value display section indicates “—-” Every time any key on the operat ion panel is pressed, the entered value is added and displayed on the value display section. However, the keys that were pressed once are not counted again.<br>• When the PRINT switch is pressed, the entered value is added and displayed for 3 sec and all the LEDs are lighted. (LED lighting check mode)<br>(Note for Key input check mode)<br>• Press the PRINT switch at the end. (If it is pressed in the middle of the process, the entered value up to that moment is displayed for 3 sec and the machine enters the LED lighting check mode. (ALL the LEDs are lighted.))<br>• Multiple key inputs are ignored.</td></tr>
<tr><td></td><td>02</td><td>Fusing lamp, cooling fan operation check<br>When the PRINT switch is pressed, the fusing lamp repeats operations of 500ms-ON and 500ms-OFF 5 times. During that time, the cooling fan motor rotates.</td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>05</td><td>03</td><td>Copy lamp ON<br>(Operation/Procedure)<br>When the START key is pressed, the copy lamp is lighted for 5 sec.</td></tr>
<tr><td>06</td><td>01</td><td>Paper feed solenoid ON<br>(Operation/Procedure)<br>When the START key is pressed, the paper feed solenoid selected by the tray select key repeats ON (500ms) and OFF (500ms) 20 times.</td></tr>
<tr><td></td><td>02</td><td>Resist solenoid ON<br>(Operation/Procedure)<br>When the START key is pressed, the resist solenoid (RRS) repeats ON (500ms) and OFF (500ms) 20 times.</td></tr>
<tr><td>07</td><td>01</td><td>Warm-up display and aging with jam<br>(Operation/Procedure)<br>1. When the simulation is executed, warming up is started.<br>2. Warm-up time is counted and displayed every second on the copy quantity display.<br>3. After completion of warm-up, the time count is stopped and the ready lamp is lighted.<br>4. Press the clear key to clear the warm-up time display, set the copy quantity, and press the START key, and the machine will copy the set quantity repeatedly.<br>This simulation is canceled by turning off the power or executing any simulation which performs hardware reset.</td></tr>
<tr><td></td><td>06</td><td>Intermittent aging<br>(Operation/Procedure)<br>1. When the simulation is executed, warming up is started.<br>2. After completion of warm-up, the ready lamp is lighted.<br>3. Set the copy quantity and press the START key, and the machine will copy the set quantity repeatedly.<br>4. After 3 sec of the interval time from completion of copying the set quantity, the machine will resume copying.<br>5. The above operation 4 is repeated.<br>This simulation is canceled by turning off the power or executing any simulation which performs hardware reset.</td></tr>
<tr><td>08</td><td>01</td><td>Developing bias<br>(Operation/Procedure)<br>When the START key is pressed, the developing bias is outputted for 30 sec.</td></tr>
<tr><td></td><td>02</td><td>Main charger (Grid high)<br>(Operation/Procedure)<br>When the START key is pressed, the main charger output is supplied for 30 sec in the grid voltage HIGH mode.</td></tr>
<tr><td></td><td>03</td><td>Grid voltage (Low)<br>(Operation/Procedure)<br>When the START key is pressed, the main charger output is supplied for 30 sec in the grid voltage LOW mode.</td></tr>
<tr><td></td><td>06</td><td>Transfer charger<br>(Operation/Procedure)<br>When the START key is pressed, the transfer charger output is supplied for 30 sec.</td></tr>
<tr><td>10</td><td>None</td><td>Toner motor aging<br>(Operation/Procedure)<br>When the START key is pressed, the toner motor output is supplied for 30 sec.</td></tr>
<tr><td>14</td><td>None</td><td>Cancel of troubles other than U2<br>(Operation/Procedure)<br>After canceling the trouble, the simulation is also automatically canceled.</td></tr>
<tr><td>16</td><td>None</td><td>Cancel of U2 trouble<br>(Operation/Procedure)<br>1. When the START key is pressed, the EEPROM total counter check sum is rewritten and the trouble is canceled.<br>2. After canceling the trouble, the simulation is also automatically canceled.</td></tr>
<tr><td>20</td><td>01</td><td>Maintenance counter clear<br>When the PRINT switch is pressed, the maintenance count is cleared and the value “000000” is displayed.</td></tr>
<tr><td>21</td><td>01</td><td>Maintenance cycle setup<br>The currently set code (default) of the maintenance cycle is displayed, and the newly set data are saved.
<table>
<tr><th>Code</th><th>Setup</th></tr>
<tr><td>0</td><td>3,000 sheets</td></tr>
<tr><td>1</td><td>6,000 sheets</td></tr>
<tr><td>2</td><td>9,000 sheets</td></tr>
<tr><td>3</td><td>13,000 sheets</td></tr>
<tr><td>4</td><td>25,000 sheets *Default</td></tr>
<tr><td>5</td><td>Free (999,999 sheets)</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>21</td><td>02</td><td>Mini maintenance cycle setup (Valid only when the destination is set to Japan AB series.)<br>The currently set code (default) of the mini maintenance cycle is displayed, and the newly set data are saved.<br><br><table><tr><th>Code</th><th>Setup</th></tr><tr><td>0</td><td>5,000 sheets *Default</td></tr><tr><td>1</td><td>10,000 sheets</td></tr><tr><td>2</td><td>Free (999,999 sheets)</td></tr></table></td></tr>
<tr><td rowspan="22">22</td><td>01</td><td>Maintenance counter display<br>The display method is the same as the total count value display.</td></tr>
<tr><td>02</td><td>Maintenance preset value display<br>The quantity corresponding to the code set with 21-01 and 21-02 is displayed.<br>The display method is the same as the total count value display.</td></tr>
<tr><td>04</td><td>JAM total counter display<br>The display method is the same as the total count value display.</td></tr>
<tr><td>05</td><td>Total counter display<br>The total count value is displayed in 3 digits X 2 times repeatedly.<br><Display example: 12345><br><br>012 → Blank → 345 → Blank → 012<br>0.7s 0.3s 0.7s 1.0s 0.7s</td></tr>
<tr><td>06</td><td>Developer counter display<br>The display method is the same as the total count value display.</td></tr>
<tr><td>08</td><td>SPF counter display<br>The display method is the same as the total count value display.</td></tr>
<tr><td>12</td><td>Drum counter display<br>The display method is the same as the total count value display.</td></tr>
<tr><td>14</td><td>P-ROM version display<br>The main code and the sub code of the P-ROM version is displayed on the value display section in 2 digits alternately.<br>The display method is the same as the total count value display.</td></tr>
<tr><td>17</td><td>Copy counter display<br>The display method is the same as the total count value display.</td></tr>
<tr><td>18</td><td>Printer counter display<br>The display method is the same as the total count value display.</td></tr>
<tr><td>19</td><td>Scanner mode counter display<br>The display method is the same as the total count value display.</td></tr>
<tr><td>21</td><td>Scanner counter display<br>The display method is the same as the total count value display.</td></tr>
<tr><td>22</td><td>SPF JAM counter display<br>The display method is the same as the total count value display.</td></tr>
<tr><td rowspan="10">24</td><td>01</td><td>JAM total counter clear<br>When the PRINT switch is pressed, the JAM total count value is reset to 0.</td></tr>
<tr><td>04</td><td>SPF counter clear<br>When the PRINT switch is pressed, the SPF count value is reset to 0.</td></tr>
<tr><td>06</td><td>Developer counter clear<br>When the PRINT switch is pressed, the developer count value is reset to 0.</td></tr>
<tr><td>07</td><td>Drum counter clear<br>When the PRINT switch is pressed, the drum count value is reset to 0.</td></tr>
<tr><td>08</td><td>Copy counter clear<br>When the PRINT switch is pressed, the copy count value is reset to 0.</td></tr>
<tr><td>09</td><td>Printer counter clear<br>When the PRINT switch is pressed, the printer count value is reset to 0.</td></tr>
<tr><td>13</td><td>Scanner counter clear<br>When the PRINT switch is pressed, the scanner count value is reset to 0.</td></tr>
<tr><td>14</td><td>SPF JAM total counter clear<br>When the PRINT switch is pressed, the SPF JAM total count value is reset to 0.</td></tr>
<tr><td>15</td><td>Scanner mode counter clear<br>When the PRINT switch is pressed, the scanner mode counter is reset to 0.</td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>25</td><td>01</td><td>Main motor operation check (Cooling fan motor rotation check)<br>When the PRINT switch is pressed, the main motor (as well as the duplex motor in the duplex model) is operated for 30 sec. If the developing unit is installed at that time, the developing bias, the main charger, and the grid are outputted together in order to avoid toner consumption. Since, in this case, laser discharge is required when stopping the motor, the polygon motor is rotated at the same time. If the developing unit is not installed, the above high voltage is not outputted and only the motor is rotated.<br>☆: Do not execute this simulation by forcibly turning ON the door ON/OFF switch.</td></tr>
<tr><td></td><td>10</td><td>Polygon motor ON<br>(Operation/Procedure)<br>When the START key is pressed, the polygon motor is operated for 30 sec.</td></tr>
<tr><td>26</td><td>01</td><td>Manual feed setup<br>(Operation/Procedure)<br>1. When this simulation is executed, the currently set bypass code number is displayed.<br>2. Enter the code number corresponding to the bypass and press the START key, and the setting will be changed.<br><table><tr><th>Code number</th><th>Bypass</th></tr><tr><td>0</td><td>Single bypass</td></tr><tr><td>1</td><td>Multi bypass</td></tr></table></td></tr>
<tr><td></td><td>02</td><td>(R) SPF setup<br>When this simulation is executed, the current setup of the SPF code number is displayed. Enter the code number corresponding to the SPF and press the PRINT switch to enable the setup.<br><table><tr><th>Code number</th><th>SPF</th></tr><tr><td>0</td><td>SPF not installed</td></tr><tr><td>1</td><td>SPF installed</td></tr><tr><td>2</td><td>RSPF installed</td></tr></table></td></tr>
<tr><td></td><td>03</td><td>Second cassette setup<br>(Operation/Procedure)<br>1. When this simulation is executed, the currently set code number of the second cassette is displayed.<br>2. Enter the code number and press the start key. The setting is changed.<br><table><tr><th>Code number</th><th>Second cassette</th></tr><tr><td>0</td><td>Without second cassette</td></tr><tr><td>1</td><td>With second cassette</td></tr></table></td></tr>
<tr><td></td><td>04</td><td>Machine duplex setup<br>(Operation/Procedure)<br>1. When this simulation is executed, the currently set duplex code number is displayed.<br>2. Enter the code number corresponding to the duplex and press the ENTER key, and the setup will be changed.<br><table><tr><th>Code number</th><th>Duplex</th></tr><tr><td>0</td><td>Without Duplex</td></tr><tr><td>1</td><td>With Duplex</td></tr></table></td></tr>
<tr><td></td><td>06</td><td>Destination setup<br>When this simulation is executed, the current setup of the destination code number is displayed. Enter the code number corresponding to the destination and press the PRINT switch to enable the setup.<br><table><tr><th>Code number</th><th>Destination</th></tr><tr><td>0</td><td>Inch series</td></tr><tr><td>1</td><td>EX JAPAN AB series</td></tr><tr><td>2</td><td>JAPAN AB series</td></tr><tr><td>3</td><td>China (EX JAPAN AB series + Chinese paper support)</td></tr></table></td></tr>
<tr><td></td><td>07</td><td>Machine conditions check<br>When this simulation is executed, the current machine setup is displayed.<br><table><tr><th>CPM</th><th>Copy quantity display</th></tr><tr><td>10 cpm</td><td>10</td></tr><tr><td>12 cpm</td><td>12</td></tr><tr><td>13 cpm</td><td>13</td></tr><tr><td>14 cpm</td><td>14</td></tr><tr><td>15 cpm</td><td>15</td></tr></table></td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>26</td><td>20</td><td>Rear edge void setup<br>When this simulation is executed, the current setup of the rear edge void code number is displayed. Enter the code number corresponding to the rear edge void and press the PRINT switch to enable the setup.<br><table><tr><th>Code number</th><th>Rear edge void setup</th></tr><tr><td>0</td><td>Rear edge void provided * Default</td></tr><tr><td>1</td><td>Rear edge void not provided</td></tr></table></td></tr>
<tr><td></td><td>30</td><td>CE mark support control ON/OFF<br>When this simulation is executed, the current setup of the CE mark support code number is displayed. Enter the code number corresponding to the CE mark support setup and press the PRINT switch to enable the setup.<br><table><tr><th>Code number</th><th>CE mark support setup</th></tr><tr><td>0</td><td>CE mark support control OFF * Default (100V series)</td></tr><tr><td>1</td><td>CE mark support control ON</td></tr></table>The default for CE-support 200V series is “1.”</td></tr>
<tr><td></td><td>37</td><td>Developer life-over termination cancel<br>When this simulation is executed, the currently set code number is displayed. Enter a desired code number and press the PRINT switch, and the new setup is enabled.<br><table><tr><th>Code number</th><th>Setup</th></tr><tr><td>0</td><td>Developer life-over termination</td></tr><tr><td>1</td><td>Developer life-over termination cancel</td></tr></table></td></tr>
<tr><td></td><td>38</td><td>Cancel of stop at drum life over<br>When this simulation is executed, the current setup of the code number is displayed. Enter the code number and press the PRINT switch to enable the setup.<br><table><tr><th>Code number</th><th>Setup</th></tr><tr><td>0</td><td>Stop at drum life over * Default (AL model)</td></tr><tr><td>1</td><td>Cancel of stop at drum life over</td></tr></table></td></tr>
<tr><td></td><td>39</td><td>Memory capacity check<br>When this simulation is executed, the current memory capacity is displayed.<br><table><tr><th>Code number</th><th>Setup</th></tr><tr><td>8</td><td>8 Mbyte</td></tr><tr><td>16</td><td>16 Mbyte</td></tr></table></td></tr>
<tr><td></td><td>40</td><td>Polygon motor OFF time setup (Time required for turning OFF after completion of printing)<br>When this simulation is executed, the current setup of the code number is displayed. Enter the code number and press the PRINT switch to enable the setup.<br><table><tr><th>Code number</th><th>Setup</th></tr><tr><td>0</td><td>0 sec</td></tr><tr><td>1</td><td>30 sec * Default</td></tr><tr><td>2</td><td>60 sec</td></tr><tr><td>3</td><td>90 sec</td></tr></table></td></tr>
<tr><td></td><td>42</td><td>Transfer ON timing control setup<br>(Operation/Procedure)<br>1. When this simulation is executed, the currently set code number is displayed.<br>2. Enter the code number and press the START key, and the setting will be changed. (For any number different from the following ones, the default time is automatically set.)<br><table><tr><th>Code number</th><th>Setting</th></tr><tr><td>0</td><td>Default (330 msec)</td></tr><tr><td>1</td><td>–40 msec</td></tr><tr><td>2</td><td>–30 msec</td></tr><tr><td>3</td><td>–20 msec</td></tr><tr><td>4</td><td>–10 msec</td></tr><tr><td>5</td><td>Default (330 msec)</td></tr><tr><td>6</td><td>+10 msec</td></tr><tr><td>7</td><td>+20 msec</td></tr><tr><td>8</td><td>+30 msec</td></tr><tr><td>9</td><td>+40 msec</td></tr></table></td></tr>
</table>

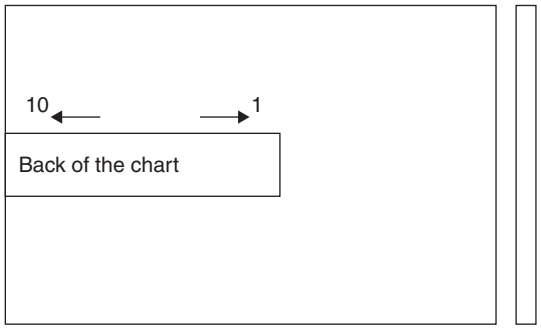
<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>26</td><td>43</td><td>Side void setup<br>(Operation/Procedure)<br>1. When this simulation is executed, the currently set code number of the side void amount is displayed.<br>2. Enter the code number and press the start key. The setting is changed.<br><br>
<table>
<tr><th>Code number</th><th>Setting</th></tr>
<tr><td>0</td><td>0 mm</td></tr>
<tr><td>1</td><td>0.5 mm</td></tr>
<tr><td>2</td><td>1.0 mm</td></tr>
<tr><td>3</td><td>1.5 mm</td></tr>
<tr><td>4</td><td>2.0 mm * Default</td></tr>
<tr><td>5</td><td>2.5 mm</td></tr>
<tr><td>6</td><td>3.0 mm</td></tr>
<tr><td>7</td><td>3.5 mm</td></tr>
<tr><td>8</td><td>4.0 mm</td></tr>
<tr><td>9</td><td>4.5 mm</td></tr>
<tr><td>10</td><td>5.0 mm</td></tr>
</table></td></tr>
<tr><td></td><td>44</td><td>SPF document rear edge read setup + Fax document rear edge scan setup.<br>When this simulation is executed, the currently set code number is displayed. Enter the desired code number and press the START key, and the display will be changed. The document rear edge scanning area in SPF reduction (less than 100%) copy is changed.<br>The code number is changeable in the range of 0 –8.<br>The default value is 4, and 2 mm of the document rear edge is cut.<br>When the value is changed by 1, the area is changed by 1 mm.</td></tr>
<tr><td></td><td>62</td><td>Energy-save mode copy lamp setup<br>Used to set half-ON (50%)/OFF of the copy lamp in the pre-heat mode.<br>When this simulation is executed, the current setup of the code number is displayed. Enter the code number and press the PRINT switch to enable the setup.<br><br>
<table>
<tr><th>Code number</th><th>Setup</th></tr>
<tr><td>0</td><td>Copy lamp half-ON (50%) * Default</td></tr>
<tr><td>1</td><td>Copy lamp OFF</td></tr>
</table></td></tr>
<tr><td></td><td>63</td><td>Fan control select setup<br>Used to set the cooling fan operation mode.<br>When this simulation is executed, the current setup of the code number is displayed. Enter the code number and press the PRINT switch to enable the setup.<br><br>
<table>
<tr><th>Code number</th><th>Setup</th></tr>
<tr><td>1</td><td>1-speed fan control</td></tr>
<tr><td>2</td><td>2-speed fan control * Default when starting mass production</td></tr>
</table></td></tr>
<tr><td></td><td>64</td><td>Heater control setup during the scanner mode<br>When this simulation is executed, the currently set code number of heater control setup is displayed. Enter a desired code number of heater control setup and press the PRINT switch, and the new setup is enabled.<br><br>
<table>
<tr><th>Code number</th><th>Heater control setup</th></tr>
<tr><td>0</td><td>Heater control ON * Default (Except for Europe)</td></tr>
<tr><td>1</td><td>Heater control OFF * Default (For Europe only)</td></tr>
</table></td></tr>
<tr><td>30</td><td>01</td><td>Paper sensor status display<br>Indicates the paper sensor status using the lamps on the operation panel.<br><br>
<table>
<tr><th>Sensor name</th><th>Display lamp</th></tr>
<tr><td>Before-resist paper sensor (PPD1)</td><td>Developer cartridge replacement lamp</td></tr>
<tr><td>Fusing section paper sensor (PPD2)</td><td>JAM lamp</td></tr>
<tr><td>Paper exit sensor (POD)</td><td>Photoconductor cartridge replacement lamp</td></tr>
<tr><td>2nd CS paper sensor (PPD3)</td><td>2nd cassette lamp</td></tr>
<tr><td>New drum cartridge sensor (PUIS)</td><td>Zoom lamp</td></tr>
<tr><td>Single manual feed paper sensor (MFD)</td><td>AE lamp</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>43</td><td>01</td><td>Fusing temperature setup (Normal copy)<br>(Operation/Procedure)<br>1. When this simulation is executed, the currently set code number is displayed.<br>2. Enter the code number and press the START key, and the setting will be changed.<br><br>
<table>
<tr><th>Code number</th><th>Set temperature (℃)</th></tr>
<tr><td>0</td><td>175</td></tr>
<tr><td>1</td><td>180</td></tr>
<tr><td>2</td><td>185</td></tr>
<tr><td>3</td><td>190</td></tr>
<tr><td>4</td><td>195 (* Default)</td></tr>
<tr><td>5</td><td>200</td></tr>
</table>
</td></tr>
<tr><td></td><td>04</td><td>Fusing temperature setup 2<br>(Operation/Procedure)<br>1. When this simulation is executed, the currently set code number is displayed.<br>2. Enter the code number and press the START key, and the setting will be changed.<br><br>
<table>
<tr><th>Code number</th><th>Set temperature (℃)</th></tr>
<tr><td>0</td><td>155</td></tr>
<tr><td>1</td><td>160</td></tr>
<tr><td>2</td><td>165</td></tr>
<tr><td>3</td><td>170 (* Default)</td></tr>
<tr><td>4</td><td>175</td></tr>
<tr><td>5</td><td>180</td></tr>
</table>
</td></tr>
<tr><td></td><td>05</td><td>Fusing temperature setup in duplex copy<br>In duplex copy, this setup value is added to the fusing temperature of single copy. When this simulation is executed, the current setup of the code number is displayed. Enter the code number and press the PRINT switch to enable the setup.<br><br>
<table>
<tr><th>Code number</th><th>Temperature shift (℃)</th></tr>
<tr><td>0</td><td>±0℃ * Default</td></tr>
<tr><td>1</td><td>–8℃</td></tr>
<tr><td>2</td><td>–6℃</td></tr>
<tr><td>3</td><td>–4℃</td></tr>
<tr><td>4</td><td>–2℃</td></tr>
<tr><td>5</td><td>±0℃</td></tr>
<tr><td>6</td><td>+2℃</td></tr>
<tr><td>7</td><td>+4℃</td></tr>
<tr><td>8</td><td>+6℃</td></tr>
<tr><td>9</td><td>+8℃</td></tr>
</table>
</td></tr>
<tr><td></td><td>09</td><td>Setup of fusing control of postcard size paper<br><br>
<table>
<tr><th>Code number</th><th>Setup</th></tr>
<tr><td>0</td><td>Cancel * Default</td></tr>
<tr><td>1</td><td>Setup</td></tr>
</table>
The default for Japan model is “1.”</td></tr>
</table>

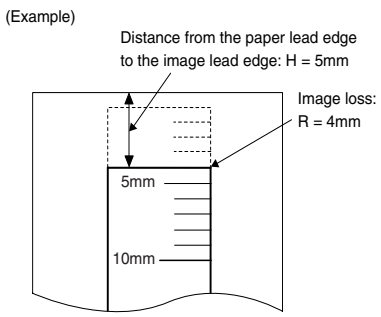
<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>46</td><td>01</td><td>Copy density adjustment (300dpi)<br>Used to set the copy density in each mode.<br>(Operating procedure)<br>When this simulation is executed, warm-up and shading operations are performed and the current setup is displayed in two digits (default: 50).<br>Change the setup value with the copy quantity keys. Press the PRINT switch and a copy is made according to the new setup.<br>The greater the setup value is, the darker the copy is. The smaller the setup value is, the brighter the copy is. Only EXP.3 copy is made in this simulation. When set to a darker level, Exp.1 and Exp.5 copies also become darker. When set to a brighter level, Exp.1 and Exp.5 copies also become brighter. Press the CLEAR key to save the setup and exit from the simulation mode.<br>Use the copy mode select key to select a copy mode . The setup value of the selected copy mode is displayed on the copy quantity display.<br>(adjustment range: 0 –99)<br><table><tr><th>Copy mode</th><th>Display lamp</th></tr><tr><td>AE mode (300dpi)</td><td>AE mode lamp</td></tr><tr><td>TEXT mode (300dpi)</td><td>TEXT mode lamp</td></tr><tr><td>PHOTO mode</td><td>PHOTO mode lamp</td></tr><tr><td>TS mode (TEXT) (300dpi)</td><td>TEXT mode lamp & PHOTO mode lamp</td></tr><tr><td>TS mode (AE) (300dpi)</td><td>AE mode lamp & PHOTO mode lamp</td></tr></table></td></tr>
<tr><td></td><td>02</td><td>Copy density adjustment (600dpi)<br>Used to set the copy density in each mode.<br>(Operation/Procedure)<br>When this simulation is executed, the machine performs warm-up and shading, and the current setup value is displayed in two digits. (Default: 50)<br>Use the copy quantity key to change the setup value, and press the PRINT switch to make a copy with the new setup.<br>The greater the setup value is, the darker the copy is, and vise versa. Only EXP.3 copy is made. If it is set to a darker density, EXP.1 and EXP.5 copies also become darker. If it is set to a brighter density, they also become brighter.<br>When the CLEAR key is pressed, the entered setup value is saved and the simulation is terminated.<br>Any copy mode can be selected with the copy mode select key. The setup value of the selected copy mode is displayed on the copy quantity display.<br>(Setup range: 0 –99)<br><table><tr><th>Copy mode</th><th>Display lamp</th></tr><tr><td>AE mode (600dpi)</td><td>AE mode lamp</td></tr><tr><td>TEXT mode (600dpi)</td><td>TEXT mode lamp</td></tr><tr><td>PHOTO mode</td><td>PHOTO mode lamp</td></tr><tr><td>TS mode (TEXT) (600dpi)</td><td>TEXT mode lamp & PHOTO mode lamp</td></tr><tr><td>TS mode (AE) (600dpi)</td><td>AE mode lamp & PHOTO mode lamp</td></tr></table></td></tr>
<tr><td></td><td>18</td><td>Image contrast adjustment (300dpi)<br>Used to set the image contrast in each mode.<br>(Operating procedure)<br>When this simulation is executed, warm-up and shading operations are performed and the current setup value is displayed in two digits. (Default: 50)<br>Change the setup value with the copy quantity keys. Press the PRINT switch and a copy is made according to the new setup. The greater the setup value is, the higher the contrast is. The smaller the setup value is, the lower the contrast is. Though only EXP.3 copy is made in this simulation, the contrast levels in EXP.1 and EXP.5 are also changed. Press the CLEAR key to save the setup and exit from the simulation mode.<br>Use the copy mode select key to select a copy mode . The setup value of the selected copy mode is displayed on the copy quantity display.<br>(adjustment range: 0 –99)<br><table><tr><th>Copy mode</th><th>Display lamp</th></tr><tr><td>AE mode (300dpi)</td><td>AE mode lamp</td></tr><tr><td>TEXT mode (300dpi)</td><td>TEXT mode lamp</td></tr><tr><td>PHOTO mode</td><td>PHOTO mode lamp</td></tr><tr><td>TS mode (TEXT) (300dpi)</td><td>TEXT mode lamp & PHOTO mode lamp</td></tr><tr><td>TS mode (AE) (300dpi)</td><td>AE mode lamp & PHOTO mode lamp</td></tr></table></td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>46</td><td>19</td><td>γ table setup or AE operation mode setup<br>When this simulation is executed, the current setup of the gamma table code number is displayed. (Default: Japan = 1, EX Japan = 2)<br>Enter the code number corresponding to desired gamma table, and press the PRINT switch or the copy mode select key to enable the setup.<br><br><table><tr><th>Code number</th><th>γ table</th></tr><tr><td>1</td><td>Image quality priority mode</td></tr><tr><td>2</td><td>Toner consumption priority mode</td></tr></table><br>When the copy mode select key is pressed during setup of the gamma table, the mode is switched to the AE operation setup mode and the current setup of the AE operation mode code number is displayed. (Default: 0) Enter the code number corresponding to your desired AE operation mode, and press the PRINT switch or the copy mode select key to switch the setup. (When the copy mode select key is pressed, the mode is returned to the gamma table setup mode.)<br><br><table><tr><th>Code number</th><th>AE operation mode</th></tr><tr><td>0</td><td>Fixed process * Default</td></tr><tr><td>1</td><td>Real time process</td></tr></table></td></tr>
<tr><td></td><td>20</td><td>SPF exposure correction<br>Used to adjust the exposure correction quantity in the SPF mode by adjusting the differential of Vref voltage for the OC mode.<br>(Operating procedure)<br>When this simulation is executed, the current setup is displayed. Enter the adjustment value with the 10-key and press the PRINT key to enable the setup and make a copy.<br>When the CLEAR key is pressed, the entered value is saved and the simulation mode is terminated.<br>* The greater the value is the darker the exposure is.<br>The smaller the value is, the brighter the exposure is.</td></tr>
<tr><td></td><td>29</td><td>Image contrast adjustment (600dpi)<br>Used to set the contrast in each mode.<br>(Operation/Procedure)<br>When this simulation is executed, the machine performs warm-up and shading, and the current setup value is displayed in two digits. (Default: 50)<br>Use the copy quantity keys to change the setup value, and press the PRINT switch to make a copy with the new setup.<br>The greater the setup value is, the greater the contrast is, and vise versa. Only EXP.3 copy is made, however, EXP.1 contrast and EXP.5 contrast are also changed accordingly.<br>When the CLEAR key is pressed, the entered setup value is saved and the simulation is terminated.<br>Any copy mode can be selected with the copy mode select key. The setup value of the selected copy mode is displayed on the copy quantity display.<br>(Setup range: 0 –99)<br><br><table><tr><th>Copy mode</th><th>Display lamp</th></tr><tr><td>AE mode (600dpi)</td><td>AE mode lamp</td></tr><tr><td>TEXT mode (600dpi)</td><td>TEXT mode lamp</td></tr><tr><td>PHOTO mode</td><td>PHOTO mode lamp</td></tr><tr><td>TS mode (TEXT) (600dpi)</td><td>TEXT mode lamp & PHOTO mode lamp</td></tr><tr><td>TS mode (AE) (600dpi)</td><td>AE mode lamp & PHOTO mode lamp</td></tr></table></td></tr>
</table>

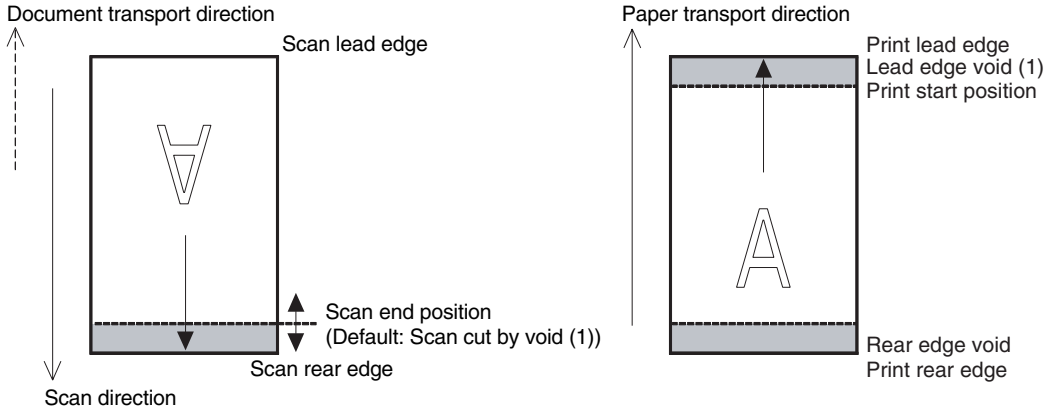
<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>46</td><td>31</td><td>
Image sharpness adjustment<br>
Used to adjust the clear/shading-off of an image in each mode.<br>
(Operating procedure)<br>
When this simulation is executed, warm-up and shading operations are performed and the current setup value is displayed. (Default: 1)<br>
Change the setup value with the copy quantity keys. Press the PRINT switch and a copy is made according to the new setup. When the clear key is pressed, the entered setup value is saved and the simulation is terminated.
<table>
<tr><th>Setup value</th><th>Image quality</th></tr>
<tr><td>0</td><td>Shading off</td></tr>
<tr><td>1</td><td>Standard * Default</td></tr>
<tr><td>2</td><td>Clear</td></tr>
</table>
Any desired copy mode can be selected with the copy mode select key. The code number of the selected copy mode is displayed on the copy quantity display.
<table>
<tr><th>Copy mode</th><th>Display lamp</th></tr>
<tr><td>AE mode</td><td>AE mode lamp</td></tr>
<tr><td>TEXT mode</td><td>TEXT mode lamp</td></tr>
<tr><td>PHOTO mode</td><td>PHOTO mode lamp</td></tr>
<tr><td>TS mode (TEXT)</td><td>TEXT mode lamp & PHOTO mode lamp</td></tr>
<tr><td>TS mode (AE)</td><td>AE mode lamp & PHOTO mode lamp</td></tr>
</table>
</td></tr>
<tr><td></td><td>32</td><td>
Copier color reproduction setup<br>
Used to set color reproduction for each mode. Colors which are easily copied or which are not easily copied are selected.
<table>
<tr><th>Setup value</th><th>Easy-to-copy colors</th><th>Difficult-to-copy colors</th></tr>
<tr><td>0</td><td>Purple/Blue/Red</td><td>Yellow/Green/Light blue</td></tr>
<tr><td>1</td><td>Light blue/Green/Blue</td><td>Purple/Red/Yellow</td></tr>
<tr><td>2</td><td>Yellow/Red/Green</td><td>Blue/Light blue/Purple</td></tr>
</table>
∗ This setup does not affect black-and-white copies.<br>
(Operating procedure)<br>
When this simulation is executed, the current setup of the code number for each copy mode is displayed. (Default: 0)<br>
Change the setup value with the copy quantity keys and press the Print switch. A copy will be made according to the setup. At that time, the color component used for copying is changed.<br>
When the clear key is pressed, the entered code number is saved and the simulation mode is terminated.<br>
Any desired copy mode can be selected with the copy mode select key. The selected copy mode is displayed on the copy quantity display.
<table>
<tr><th>Code number</th><th>Component of use</th></tr>
<tr><td>0</td><td>Green * Default</td></tr>
<tr><td>1</td><td>Red</td></tr>
<tr><td>2</td><td>Blue</td></tr>
</table>
<table>
<tr><th>Copy mode</th><th>Display lamp</th></tr>
<tr><td>AE mode (including TS)</td><td>AE mode lamp</td></tr>
<tr><td>TEXT mode (including TS)</td><td>TEXT mode lamp</td></tr>
<tr><td>PHOTO mode</td><td>PHOTO mode lamp</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>48</td><td>01</td><td>
Front/rear (main scanning) direction and scan (sub scanning) direction magnification ratio adjustment<br>
(1) Front/rear direction magnification ratio auto correction: The width of the reference line marked on the shading correction plate is scanned to perform automatic correction of the front/rear (main scanning) direction magnification ratio as well as automatic setup of the OC/document center offset value and of the image scan start position.<br>
In addition, the black level automatic adjustment is performed simultaneously.<br>
The OC/document center offset value and the image scan start position automatically set in this simulation, can be checked by the respective manual setup simulation for each adjustment shown below.<br>
<table>
<tr><td>OC/document center offset</td><td>→</td><td>Sim50-10</td><td>Center offset adjustment</td></tr>
<tr><td>Image scan start position</td><td>→</td><td>Sim50-01</td><td>Lead edge image position</td></tr>
</table>
(2) Front/rear direction magnification ratio manual correction: By key operations, the front/rear (main scanning) direction magnification ratio is set by changing the setup value of the ZOOM DATA register to AISC.<br>
(3) Scan direction magnification ratio correction: The scan direction magnification ratio in the OC mode is set by changing the scan speed.<br>
(4) SPF mode scan direction magnification ratio correction: The SPF mode scan direction magnification ratio is set by changing the scan speed.<br>
(Operating procedure)<br>
When this simulation is executed, the current setup value is displayed in two digits. (Center value: 50) Press the copy mode select key to select each setup mode and the setup display will change accordingly.<br>
In the case of the front/rear direction automatic adjustment.<br>
To perform the automatic adjustment, place the gray gradation chart (UKOG-0162FCZZ) face down so as to fit with the left center of the platen with the darker side (Density 10) on the left of OC.<br>


When the PRINT switch is pressed, the mirror base unit moves to the shading white board, and the width of the reference line is scanned, and the correction value is calculated, and the value is saved.<br>
After completion of the automatic adjustment, press the density adjustment Down key, and the black level will be displayed in hexadecimal number (3 digits) of 12bits.<br>
For manual adjustment, enter the adjustment value with the 10-key and press the PRINT switch, the set value will be saved and a copy will be made. When the clear key is pressed, the value entered will be saved and the simulation will be terminated. (Increasing the setup value by 1 increases 0.1%.)<br>
<table>
<tr><th>Adjustment mode</th><th>Lamp ON</th></tr>
<tr><td>Front/rear direction magnification ratio automatic correction and black level adjustment</td><td>AE lamp</td></tr>
<tr><td>Front/rear direction magnification ratio manual correction</td><td>TEXT lamp</td></tr>
<tr><td>Scan direction magnification ratio correction</td><td>PHOTO lamp</td></tr>
<tr><td>SPF mode scan direction magnification ratio correction</td><td>AE, TEXT, PHOTO lamps</td></tr>
</table>
In the front/rear direction magnification ratio automatic correction<br>
(1) When the calculated value of the scan correction value is within ±5%, "—" is displayed.<br>
(Cause) Erroneous position of the reference line on the white board, improper installation of the lens unit, etc.<br>
(2) In case of a scan error of the reference line, the jam lamp lights up.<br>
(Cause) CCD error, no white board installed.<br>
∗ If the automatic correction of the magnification ratio cannot provide a satisfactory result, use the manual correction.
</td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>49</td><td>01</td><td>
Flash ROM program writing mode<br>
(Operating procedure)<br>
When this simulation is executed, “d” is displayed on the display and the machine enters the Flash ROM program writing mode. Use the writing tool to write the program from PC. During writing, the display indicates as shown below. After completion of downloading, turn OFF/ON the power to reset.
<table>
<tr><th>Status</th><th>Display</th><th>Pre-heat lamp</th><th>Ready lamp</th></tr>
<tr><td>Download data reception</td><td>“d” ON</td><td>ON</td><td>OFF</td></tr>
<tr><td>Data erase start</td><td>“d” ON</td><td>OFF</td><td>ON</td></tr>
<tr><td>Data writing (Boot section)</td><td>“d” ON</td><td>Blink</td><td>OFF</td></tr>
<tr><td>Data writing (program section)</td><td>“d” ON</td><td>Blink</td><td>Blink</td></tr>
<tr><td>Sum check</td><td>“d” ON</td><td>ON</td><td>ON</td></tr>
<tr><td>Download complete</td><td>“0FF” ON</td><td>OFF</td><td>OFF</td></tr>
<tr><td>Error state</td><td>“E *” ON</td><td>OFF</td><td>OFF</td></tr>
</table>
∗ “*” in an error display indicates the error position.
<table>
<tr><td>1</td><td>Data reception error</td></tr>
<tr><td>2</td><td>Loader function transfer</td></tr>
<tr><td>3</td><td>FLASH ROM delete</td></tr>
<tr><td>4</td><td>FLASH ROM writing (Boot section)</td></tr>
<tr><td>5</td><td>FLASH ROM writing (Program section)</td></tr>
<tr><td>6</td><td>Sum check (Loader section)</td></tr>
<tr><td>7</td><td>Sum check (Boot section)</td></tr>
<tr><td>8</td><td>Sum check (Program section)</td></tr>
</table>
</td></tr>
<tr><td>50</td><td>01</td><td>
Lead edge image position<br>
Used to adjust the copy image position and the lead edge void quantity on the copy paper. The adjustment is made by adjusting the image scan start position and the print start position (resist roller ON timing) at 100%.<br>
(Operating procedure)<br>
When this simulation is executed, the current setup value is displayed the current setup value is displayed in two digits. (Center value: 50) Press the copy mode select key to select your desired coy mode, and the display will change. Enter the adjustment value with the 10-key and press the PRINT switch, and the setup value will be saved and a copy will be made. Press the clear key to save the setup value and exit from the simulation mode. When the adjustment is made for the main cassette feed, all the adjustment values at all the paper feed ports become the same. (Increasing the setup value by 1 corresponds to about 0.1mm shift.)
<table>
<tr><th>Adjustment mode</th><th>Lamp ON</th></tr>
<tr><td>Print start position (Main cassette paper feed)</td><td>AE, main cassette lamp</td></tr>
<tr><td>☆ Print start position (2nd cassette paper feed)</td><td>AE, 2nd cassette lamp</td></tr>
<tr><td>Print start position (Manual paper feed)</td><td>AE, manual feed lamp</td></tr>
<tr><td>Image lead edge void quantity</td><td>TEXT lamp</td></tr>
<tr><td>Image scan start position</td><td>PHOTO lamp</td></tr>
<tr><td>Image rear edge void quantity</td><td>AE, TEXT, PHOTO lamp</td></tr>
<tr><td>☆ SPF image scan start position</td><td>AE, TEXT lamp</td></tr>
</table>
☆: Supported if the model is installed and skipped if it is not installed.<br>
(Adjustment procedure)<br>
AE ON → TEXT ON → PHOTO ON<br>
1. Set the print start position (A), the lead edge void quantity (B) and the scan start position (C) to 0, and make a copy at 100%.<br>
2. Measure the image loss quantity (R mm) of the scale.<br>
Set C = 10 × R (mm) (Example: Set 40.)<br>
When the value C is increased by 10, the image loss is decreased by 1mm.<br>
(Default: 50)<br>
3. Measure the distance (H mm) from the paper lead edge to the image print start position.<br>
Set A = 10 × H (mm) (Example: set 50)<br>
When the value A is increased by 1mm, the image lead edge is shifted to the paper lead edge by 1mm. (Default: 50)<br>
4. Set the lead edge void quantity to B = 50 (2.5mm). (Default: 50)<br>
When the value B is increased by 10, the void is increased by about 1mm.<br>
(When set to 25 or less, the void becomes zero.)<br>
∗ The SPF adjustment is performed by adjusting the SPF image scan start position.<br>
(Example)<br>


</td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>50</td><td>10</td><td>Center offset adjustment<br>Used to adjust the copy image position on the copy paper and the center offset position when scanning a document.<br>(Operating procedure)<br>When this simulation is executed, the current setup value is displayed. Enter the adjustment value with the 10-key and press the PRINT switch, and the entered value will be saved and a copy will be made. When the clear key is pressed, the entered value will be saved and the simulation will be terminated. (When the setup value is increased by 1, shift is increased by 0.1mm.)<br><table><tr><th>Adjustment mode</th><th>Lamp ON</th></tr><tr><td>Print center offset (Main cassette paper feed)</td><td>AE, main cassette lamp</td></tr><tr><td>☆ Print center offset (2nd cassette paper feed)</td><td>AE, 2nd cassette lamp</td></tr><tr><td>Print center offset (Manual paper feed)</td><td>AE, manual paper feed lamp</td></tr><tr><td>OC/document center offset</td><td>AE, TEXT lamp</td></tr><tr><td>☆ SPF/RSPF (front) document center offset</td><td>AE, TEXT, PHOTO lamp</td></tr></table>☆: Supported only for installing models, and skipped for not-installing models.<br>* When the setup value is too great, outside of the shading area may be read, and black streaks may be produced on the edges.<br>When the adjustment value is increased, the image is shifted to the left.<br>When the adjustment value is decreased, the image is shifted to the right.</td></tr>
<tr><td></td><td>18</td><td>Memory reverse position adjustment in duplex copy<br>When this simulation is executed, the current setup value of correction is displayed. Enter the correction value with the 10-key and press the PRINT switch, and the entered value will be saved. (Correction value 1 – 99, correction zero = 0, or 50) When the correction value is set to 0, the correction value is written as 50.<br>Front surface printing in the S-D mode and printing on even pages in the D-S mode are reverse memory copy operations from the document rear edge section.<br>When, therefore, the output image print position adjustment is required, adjust as follows:<br>In the reverse memory copy operation, if the document scan direction is in the direction of the arrow in the figure, the scan rear edge section of the image is printed first.<br>When, therefore, the print lead edge is shifted, set the reference chart so that the reference position is in the rear edge section, and use this simulation to adjust so that the print image lead edge comes to the lead edge.<br>Since printing is performed by processing the scanned image from the scan end position to the scan lead edge, the print lead edge position adjustment is performed by changing the end data position stored in memory with the simulation setup value.<br> 
</td></tr>
<tr><td></td><td>19</td><td>Duplex copy rear edge void adjustment<br>Used to adjust the rear edge void quantity in duplex copy.<br>(Operating procedure)<br>When this simulation is executed, the current setup value is displayed the current setup value is displayed in two digits. (Center value: 50 However, setup 50 = setup 0) When the correction value is set to 0, the correction value is written as 50. Press the copy mode select key to select your desired copy mode, and the display will change. Enter the adjustment value with the 10-key and press the PRINT switch, and the setup value will be saved and a copy will be made. (The paper information is cleared for every copying.) Press the clear key to save the setup value and exit from the simulation mode. (Increasing the setup value by 1 increases the void quantity by about 0.1mm.)<br><table><tr><th>Adjustment mode</th><th>Lamp ON</th></tr><tr><td>Image cut rear edge void quantity (RSPF)</td><td>AE lamp</td></tr><tr><td>Paper rear edge void quantity</td><td>TEXT lamp</td></tr><tr><td>Print start position (Duplex back)</td><td>PHOTO lamp</td></tr><tr><td>RSPF (Back) original center offset</td><td>AE, TEXT, PHOTO lamps</td></tr></table></td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Content</th></tr>
<tr><td>51</td><td>02</td><td>Resist quantity adjustment<br>Used to adjust the contact pressure of paper against the machine resist roller and the RSPF resist roller.<br>(Operating procedure)<br>When this simulation is executed, the current setup value is displayed.<br>Enter the adjustment value with the 10-key and press the PRINT switch, the entered set value will be saved and a copy will be made.<br>When the clear key is pressed, the entered value will be saved and the machine will exit from the simulation mode.<br><br>
<table>
<tr><th>Adjustment mode</th><th>Lamp ON</th></tr>
<tr><td>Main cassette paper feed</td><td>AE, main cassette lamp</td></tr>
<tr><td>☆ 2nd cassette paper feed</td><td>AE, 2nd cassette lamp</td></tr>
<tr><td>Manual paper feed</td><td>AE, manual paper feed lamp</td></tr>
<tr><td>☆ RSPF document feed (front)</td><td>AE, TEXT, PHOTO lamp</td></tr>
<tr><td>☆ RSPF document feed (back)</td><td>AE, TEXT lamp</td></tr>
<tr><td>☆ duplex back</td><td>TEXT, PHOTO lamp</td></tr>
</table>
☆: Supported only for installing models, and skipped for not-installing models.</td></tr>
<tr><td>53</td><td>08</td><td>SPF scan position automatic adjustment<br>Place a black chart so that it covers the SPF scan glass and the OC glass, and execute the simulation with the OC cover open, the mirror unit scans from the home position to the SPF scan position to identify the SPF glass cover edge position by the difference in the CCD output levels of the SPF glass cover edge and the OC side document glass.<br>Default is 50. Adjustment range is 0 – 99. Adjustment increment: 1 = about 0.127mm<br>If this adjustment is performed properly, the adjustment value is displayed. If it is abnormal, the jam lamp lights up. If the adjustment is not made properly, “– –” is displayed.</td></tr>
<tr><td>61</td><td>03</td><td>Polygon motor check (HSYNC output check)<br>(Operation/Procedure)<br>When the START key is pressed, HSYNC is performed and the polygon motor is rotated for 30 sec.<br>At that time, the Zoom lamp is lit for 100msec for every 3 times that the HSYNC is detected.</td></tr>
<tr><td>63</td><td>01</td><td>Shading check<br>Used to display the detection level of the white board for shading.<br>(Operating procedure)<br>When the PRINT switch is pressed, the mirror base unit moves to the white board for shading to light the copy lamp. Under this state, the level of one pixel at the CCD center which is not corrected for 10sec in 1 sec, and the result is displayed on the value display section.</td></tr>
<tr><td>64</td><td>01</td><td>Self print<br>Print of one page is made regardless of the status of the optical system.<br>(Operating procedure)<br>When this simulation is executed, warm-up is performed and the ready lamp is lighted. Enter the code number with the 10-key, and select the cassette with the cassette select key and press the PRINT switch, and paper feed operation will be made from the selected cassette and printing of the selected pattern will be made. Printing is in 1by2 mode, or grid pattern.<br><br>
<table>
<tr><th>Code number</th><th>Pattern</th></tr>
<tr><td>0</td><td>1by2</td></tr>
<tr><td>1</td><td>Grid pattern</td></tr>
</table>
* 2 – 99: print in 1by2.</td></tr>
</table>

# 4. Trouble codes

## A. Trouble codes list

| Main code | Sub code | Trouble content | Detail of trouble |
|---|---|---|---|
| E7 | 01 | Duplex model memory setup error, memory not-detected error | The memory is not set properly or the memory capacity is not set to the duplex setup (6M).<br>Cancel method: Set SIM 26-39 code number to 2. |
| | 02 | HSYNC not detected. | LSU (laser diode, reception element, APC circuit) trouble<br>LSU drive circuit (ASIC) trouble |
| | 10 | CCD black level trouble | CCD drive circuit (CCD PWB, ASIC, harness) trouble |
| | 11 | CCD white level trouble | CCD drive circuit (CCD PWB, ASIC harness) trouble<br>Copy lamp lighting trouble (Copy lamp, inverter PWB) |
| | 12 | Shading trouble (White correction) | Dirt on white plate for scanning white level |
| | 16 | Laser output trouble | LSU (laser diode, reception element, APC circuit) trouble<br>LSU drive circuit (ASIC) trouble |
| F5 | 02 | Copy lamp disconnection trouble | Copy lamp or copy lamp drive circuit (inverter PWB) trouble<br>Copy lamp disconnection |
| H2 | 00 | Thermistor open detection | The fusing thermistor is open. |
| H3 | 00 | Heat roller abnormally high temperature | The fusing temperature rises above 240°C. |
| H4 | 00 | Heat roller abnormally low temperature | The fusing temperature does not reach 185°C within 27 sec of turning on the power, or the fusing temperature keeps at 140°C. |
| L1 | 00 | Feeding is not completed within the specified time after starting feeding. (The scan head locking switch is locked) | The white area and the black marking on the shading plate are used to obtain the difference in the CCD level values for judgment of lock. When the difference in the levels of which and black is small, it is judged that the black mark could not be scanned by lock and the trouble code “L1” is displayed. |
| L3 | 00 | Return is not completed within the specified time. | When the mirror base is returned for the specified time (6 sec) in mirror initializing after turning on the power, the mirror home position sensor (MHPS) does not turn ON. Or when the mirror base is returned for the specified time (about 6 sec) after start of copy return, the mirror home position sensor (MHPS) does not turn ON. |
| L4 | 01 | Main motor lock | When the main motor encoder pulse is not detected for 100 msec. |
| L6 | 10 | Polygon motor lock | The lock signal (specified rpm signal) does not return within a certain time (about 20 sec) from starting the polygon motor rotation |
| U2 | 01 | Counter sum check error | When the counter check sum value stored in the EEPROM is abnormal. |
| | 04 | EEPROM serial communication error | When a communication trouble occurs with the EEPROM. |